



(19)

(11) Publication number: **2001**

Generated Document.

**PATENT ABSTRACTS OF JAPAN**(21) Application number: **2000134529**(51) Intl. Cl.: **H01L 21/304 B24B 37/04**(22) Application date: **08.05.00**

(30) Priority:	(71) Applicant: <b>NIKON CORP</b>
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**(54) POLISHING PAD,  
CHEMICAL MECHANICAL  
POLISHING DEVICE,  
METHOD OF FLATTENING  
SURFACE OF SUBSTRATE,  
AND METHOD OF  
MANUFACTURING  
SEMICONDUCTOR DEVICE**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a CMP device and a method capable of making optical access to the surface of a wafer, not so complicated, not expensive, and capable of monitoring its processing continuously and simultaneously.

SOLUTION: In a CMP method and a CMP device, a substantially round polishing pad is mounted on a rotating platen. A prescribed region of the polishing pad is decreased in thickness so as to be increased in optical transmittance. A part of the platen located just under the thinned part of the polishing pad is also transparent. The thinned part of the

*transparent*

polishing pad and the transparent part of the platen allows optical access to the surface of a wafer for simultaneous process monitoring. A dynamic process control can be realized with the input signals from an optical monitor device.

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